

40. (Currently Amended) A computer-implemented method for generating a plurality of individually schedulable assignments for a task, based upon task constraints associated with said task, said task constraints identifying N resources assigned to said task where N is a positive integer, a start time, a finish date, and a required work-amount corresponding to each of said N resources, comprising the steps of:

dividing said task into N assignments, said task comprising an amount of work, each assignment comprising a portion of the work that corresponds only with a single, [[an]] individual resource;

associating each of said N assignments with only one of said N resources, each resource comprising one of an non-human and human object capable of performing an assignment;

for each assignment, identifying the task, corresponding individual resource, and one of the portion of work corresponding to a respective resource and a duration of the assignment;

determining assignments that are independent of other assignments;

determining assignments that have finish date task constraints;

determining assignments that have start time task constraints;

scheduling the assignments that have start time task constraints before the assignments that are independent of other assignments and assignments that have finish date task constraints;

scheduling the assignments that are independent of other assignments; and

generating a schedule comprising the N assignments which is balanced and maximizes a utilization of the N resources.

41. (Previously presented) The method of claim 40, wherein said task constraints identify one or more scheduling constraints comprising one of task priority and assignment limit and further comprising the step of associating each of said N assignments with said scheduling constraints.

42. (Previously Presented) The method of Claim 40, wherein said task constraints identify one or more scheduling constraints comprising one of task priority and assignment limit.

Application Serial No. 09/721,141

43. (Currently Amended) A computer-readable medium on which is stored a computer program for generating a plurality of schedulable assignments for a task, said program performing the steps comprising:

receiving a task description for said task, said task description identifying N resources assigned to said task where N is a positive integer, said task comprising an amount of work, a required work-amount corresponding to each of said N resources, and one or more scheduling constraints for said task that comprise one of start times and finish dates;

dividing said task into N assignments, each of said N assignments identifying only one of said N resources, each assignment comprising a portion of the work that corresponds only with [[an]] a single, individual resource, each resource comprising one of an non-human and human object capable of performing an assignment;

for each assignment, identifying the task, corresponding individual resource, and one of the portion of work corresponding to a respective resource and a duration of the assignment;

associating each of said N assignments with said scheduling constraints for said task;

determining assignments that are independent of other assignments;

determining assignments that have finish date task constraints;

determining assignments that have start time task constraints;

scheduling assignments with start time task constraints before the assignments that are independent of other assignments and assignments with finish date task constraints;

scheduling the assignments that are independent of other assignments; and

generating a schedule comprising the N assignments which is balanced and maximizes a utilization of the N resources.

44. (Currently Amended) A computer system for generating assignments for a task, comprising:

- a processing unit;
- a memory storage device;
- a program module, stored in the memory storage device for providing instructions to the processing unit;

the processing unit, responsive to the instructions of the program module, operative to:

- receive a task description for the task, the task description identifying N resources assigned to the task where N is a positive integer, and identifying one or more scheduling constraints for said task that comprise one of start times and finish dates, said task comprising an amount of work;

- divide the task into N assignments, each of the N assignments identifying only one of the N resources, each assignment comprising a portion of the work that corresponds with only a single, [an] individual resource, each resource comprising one of an non-human and human object capable of performing an assignment;

- for each assignment, identify the task, corresponding individual resource, and one of the portion of work corresponding to a respective resource and a duration of the assignment;

- associate each of said N assignments with scheduling constraints for said task;

- determine assignments that are independent of other assignments;

- determine assignments that have finish date task constraints;

- determine assignments that have start time task constraints;

- schedule the assignments with start time task constraints before the assignments that are independent of other assignments and assignments with finish date task constraints;

- schedule the assignments that are independent of other assignments after the assignments with start time task constraints; and

Application Serial No. 09/721,141

generate a schedule comprising the N assignments which is balanced and maximizes a utilization of the N resources.

45. (Previously Presented) The computer system of Claim 44, wherein the processing unit is further operative to set a work-amount for each of the N assignments to the total amount of work required work divided by N.

46. (Previously Presented) The computer system of Claim 44, wherein the task description includes an assignment limit for at least one of the N resources, and the processing unit is further operative to set a work amount for each of the N assignments in accordance with the assignment limits and in a manner that the summation of all work-amounts is equal to the total amount of required work.

47. (Previously Presented) The computer system of Claim 44, wherein the task description includes one or more scheduling constraints for the task, and the processing unit is further operative to set a work-amount for each of the N assignments as a function of the scheduling constraints and in a manner that the summation of all the work-amounts is equal to the total amount of required work.

48. (Previously Presented) The computer system of Claim 44, wherein the task description includes one or more scheduling constraints for the task, and the processing unit is further operative to associate each of the N assignments with the scheduling constraints.

Application Serial No. 09/721,141

49. (Previously Presented) The computer system of Claim 44, wherein the task description includes one or more scheduling constraints for the task, and the processing unit is further operative to:

associate each of the N assignments with the scheduling constraints; and  
assign a priority to each of the assignments as a function of the scheduling

constraints.